



National Maternity & Perinatal Audit

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## National Maternity and Perinatal Audit (NMPA)

Tina Harris  
NMPA Senior Clinical Lead, Midwifery


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National Maternity & Perinatal Audit

### Outline

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- Introduction to the NMPA
- Relevance of audit to clinical practice
- Developing maternity care quality indicators
- Looking at and using NMPA results
- Looking forward to 2019 and beyond

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## The National Maternity and Perinatal Audit

### A collaborative project

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## Acknowledgements

**Project Team**

Jan van de Meulen	Senior Methodological Lead
Dharmintra Pasupathy	Obstetric Senior Clinical Lead
Tina Harris	Midwifery Senior Clinical Lead
Jane Hawdon	Neonatal Senior Clinical Lead
Jen Jardine	Obstetric Clinical Fellow
Andrea Blotkamp	Midwifery Clinical Fellow
Harriet Aughey	Neonatal Clinical Fellow
Hannah Knight	Project Manager
Ipek Gursel-Urganci	Senior Methodologist
Natalie Mollit	Statistician
Lindsey Mamza	Data Manager

**Clinical Reference Group**

**Women and Families Involvement Group**

**Funded by**

**Commissioned by**

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## Rationale for the NMPA

- Rates of stillbirth and maternal mortality are higher than in many European countries
- Growing body of evidence pointing towards variation in outcomes
- Countless inquiries concluding e.g. "the majority of births are safe, but some births are less safe than they could, and should be" Kings Fund (2008)
- £100 million in litigation costs over 10 years – higher than any other clinical specialty

**Stillbirth rate in UK one of Europe's highest, Lancet finds**

**Patterns of maternity care in English NHS trusts 2013/14**

**The Report of the NHS faces £85.8m compensation bill over maternity blunders**

**Cost of waiting services where a baby's heart rate scan was misinterpreted has increased more than seven-fold since 2006**

**How Campbell's compensation bill compares**

**The Guardian** Thursday 14 April 2017

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## Rationale for the NMPA

750,000 birth per year

10% of babies

NNAP

MBRRACE - 5.1 per 1000 babies

Each Baby Counts - 1.6 per 1000 babies

MBRRACE - 8.5 per 100,000 women

UKOSS - few hundred women per year

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## Our first 2 years

### The NMPA has three main elements

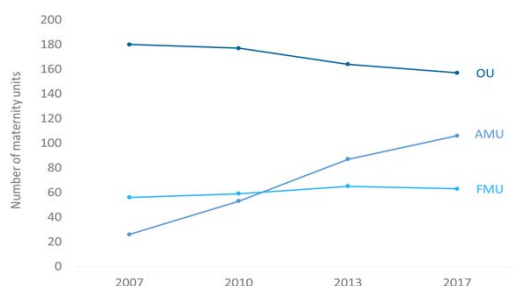
- An **organisational survey** – published August 2017
- A **continuous clinical audit** – published November 2017 repeated annually
- A programme of periodic **sprint audits** – x2 to be published in late 2018



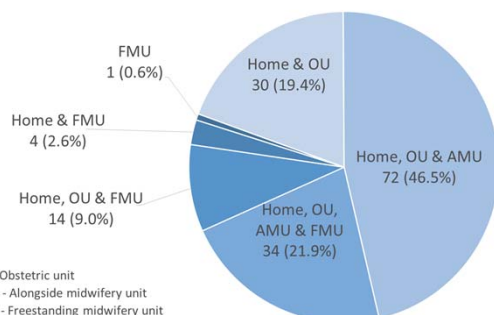
### Organisation of maternity care 2017 report

[www.maternityaudit.org.uk](http://www.maternityaudit.org.uk)

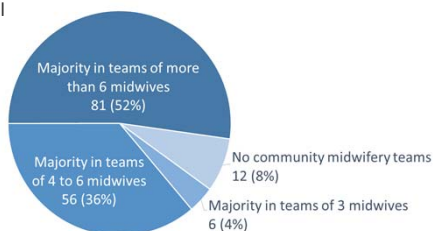
### Trend in maternity unit types 2007-2017 (England)



OU - Obstetric unit AMU - Alongside midwifery unit FMU - Freestanding midwifery unit

**Birth settings available  
per trust/board (Jan 2017)**

**Care models (Jan 2017)**

- 38% of trusts/boards used some form of caseloading
- 44% had some or all midwives working in an integrated way
- 92% had community midwives organised into teams
- Levels of continuity of carer reported were low, regardless of care model


**Clinical audit measures  
2015/16**



### First clinical report (covering births between 1<sup>st</sup> April 2015 and 31<sup>st</sup> March 2016)

- 96% of trusts/boards contributed data to the clinical report
- 92% of births are ascertained in the dataset
- Selection of measures through a process of evaluation – clinical relevance, power, and feasibility
- Characteristics of women and their babies
- 16 risk-adjusted measures of care, 2 of which were used for outlier reporting



Audit measure category	Measure title	England	Scotland	Wales
Antenatal care	Proportion of women who were smokers at booking who smoke at the time of birth			
	Proportion of women with induced labour			
	Proportion of women with a spontaneous vaginal birth			
Intrapartum Care	Proportion of vaginal births with an episiotomy			
	Proportion of women having an instrumental birth			
	Proportion of women having a caesarean section			
	Proportion of elective deliveries performed at <39 weeks of gestation without a documented clinical indication			
	VBAC rate			
Maternal morbidity	Proportion of vaginal births with a 3rd degree perineal tear			
	Proportion of women with severe PPH (>1500ml)			
	Proportion of women readmitted to hospital as an emergency within 42 days of giving birth			
Neonatal	Proportion of small-for-gestational age babies born ≥37 weeks who are not delivered before 40+0 weeks			
	Proportion of singleton, term, liveborn infants with a 5-minute Apgar score of less than 7			
	Proportion of liveborn babies with skin to skin contact within 1 hour of birth			
	Proportion of liveborn babies who are given breast milk for first feed			
	Proportion of liveborn babies who are given breast milk at discharge home			

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### Birth without intervention

- 2015/16 NMPA report:  
“In selecting measures for inclusion in the NMPA, there was a strong desire to recognise the importance not only of measuring rates of medical interventions and of adverse outcomes, but also of measuring the proportion of births that occur without interventions.

Inclusion of such a measure could, in conjunction with other NMPA measures, assist trusts/boards in ensuring that they are finding an appropriate balance between intervening ‘too much, too soon’ and ‘too little, too late.’

- Also shortlisted as a ‘National Maternity Indicator’ in England, following a Delphi consensus exercise in late 2016

## Data quality assessments

Site level data quality checks:

- Data completeness (more than 70%)
- Plausible distribution (e.g. gestational age mostly term)
- Internal consistency checks (e.g. no C-sections in freestanding midwifery led units)

Analysis in NMPA report is restricted to:

- Sites that pass NMPA data quality checks
- Birth records within those sites that contain the required data to construct a measure

The number of sites for which results are available therefore varies from measure to measure, depending on specific data requirements

## Experimental definition agreed by NMPA clinical reference group – adapted from 2007 NCT/RCM/RCOG consensus statement definition

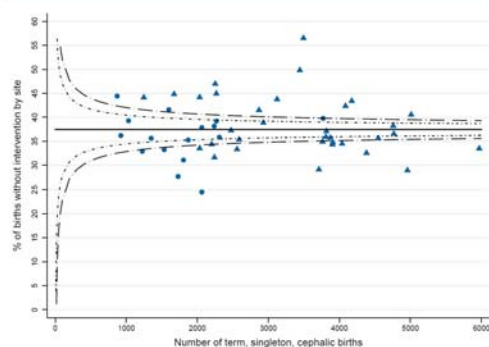
Table 3: Quality of data items required to construct a 'birth without intervention' measure

Data item required*	% of sites with an obstetric unit (OU) passing data quality checks for this item		
	% English sites (n = 151)	% Scottish sites (n = 15)	% Welsh sites (n = 11)
Mode of birth	97	100	100
Onset of labour	88	100	100
Augmentation	60	0**	81
Episiotomy	93	100	82
Anaesthetic during labour and birth	59	100	0**
% of sites with an OU passing data quality checks for all items	40	0	0

\* All measures also need to pass basic checks for plurality, gestational age, and fetal presentation since measures are restricted to singleton, term, cephalic births.

\*\* No sites passed these checks as these items are not included in national data collections.

## Birth without intervention 2015/16 (at sites with adequate data quality for all elements)





## Clinical report summary

- High-quality Great Britain dataset with some variables linked for the first time; allowing national analyses never before possible
- Risk adjusted results on key measures in maternity and neonatal care
- Site-specific results available on our website  
[www.maternityaudit.org.uk](http://www.maternityaudit.org.uk)




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## Using NMPA data

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### Third- and fourth- degree tears

**What is measured:** Of women who give birth vaginally to a singleton baby in the cephalic position between 37+0 and 42+6 weeks of gestation, the proportion who sustained a third or fourth degree tear.

Country		England	Scotland	Wales*	Total (Britain)
Number of mothers included in analysis		341,204	33,901	8,556	383,661
Proportion overall sustaining third or fourth degree tear		3.6%	3.4%	3.3%	3.5%
Primiparous women	Spontaneous	5.4%	4.9%	4.5%	5.3%
	Instrumental	7.8%	7.0%	8.5%	7.8%
Multiparous women	Spontaneous	1.6%	1.5%	1.4%	1.6%
	Instrumental	4.8%	4.1%	5.4%	4.7%

\*only Hywell Dda Health Board and Cwm Taf University Health Board passed the relevant data quality checks for this measure

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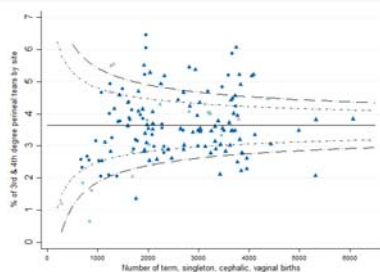
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### Third- and fourth- degree tears

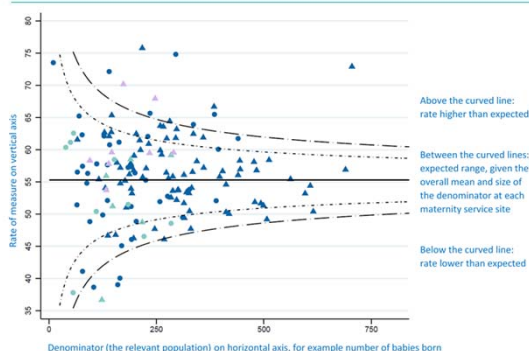
Of women who give birth vaginally to a singleton baby in the cephalic position between 37+0 and 42+6 weeks of gestation

The proportion who sustained a **third or fourth degree tear**.



Country ■ England ■ Scotland ■ Wales  
 Site with ▲ obstetric unit and alongside midwifery unit  
 ○ obstetric unit only  
 □ freestanding midwifery unit

### Funnel plots



### Interactive website: site overview

[www.maternityaudit.org.uk](http://www.maternityaudit.org.uk) > Data > Continuous Clinical Audit

Please select a maternity unit from the dropdown list in order to view a spine chart of their performance across all measures compared to the national average.



Measure	Newham General Hospital			Range	All sites included		
	Counts	Site adjusted mean			Mean	Lowest	Highest
Induction of labour (overall)	1199 / 3404	25.2%			25.3%	23.5%	40.4%
Elective deliveries at 37 to 39 weeks without a documented clinical indication (overall)	107 / 508	20.9%			20.7%	0.0%	74.5%
Small for gestational age singleton babies born at or after 40 weeks gestation (overall)	138 / 412	33.5%			33.3%	30.7%	74.9%





## Acting on findings

- Investigate variation outside of expected range (data, organisational & operational factors, case mix, guidance changes, clinical practice)
- Collaborate, e.g. through clinical networks, Local Maternity Systems
- Test improvement interventions incrementally
- Feed back to all involved
- Keep monitoring and feeding back

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## Finding similar maternity services

### Organisational survey results - maternity and neonatal services details and comparisons

Please select a topic from the menu on the left and the level at which you want to view results using the tabs below

**Neonatal units - Designation**  
 Select all:

View by view:

Organisation name	Site Name	Site Code	Designation
Horsham and Worthing University Health Board	North Port Talbot Birth Centre	76323	None
Horsham and Worthing University Health Board	Prince of Wales Hospital	76387	UKU
Horsham and Worthing University Health Board	Ingworth Hospital	76324	UKU
Horsham and Worthing University Health Board	Horsham Maternity Unit	82722	UKU
Horsham and Worthing University Health Board	North East Hospital	76388	UKU
Horsham and Worthing University Health Board	North West Hospital	76389	UKU
Horsham and Worthing University Health Board	North East Hospital	76390	None
Horsham and Worthing University Health Board	North West Hospital	76391	None
Horsham and Worthing University Health Board	North East Hospital	76392	None
Horsham and Worthing University Health Board	North West Hospital	76393	None

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## Some sources of maternity data

### Annual:

- National Maternity and Perinatal Audit [www.maternityaudit.org.uk](http://www.maternityaudit.org.uk)
- NHS Digital annual national maternity stats <https://digital.nhs.uk/data-and-information/publications/statistical/nhs-maternity-statistics>
- Public Health Data <https://fingertips.phe.org.uk/profile-group/child-health>

### Monthly:

- NHS Digital Maternity Services Data Set (MSDS) monthly reports <https://digital.nhs.uk/data-and-information/publications/statistical/maternity-services-monthly-statistics>
- NHS Digital new maternity services data viewer and monthly dashboard <https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/maternity-services-data-set/maternity-services-dashboard>

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**Questions?**





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**Thank you!**

[www.maternityaudit.org.uk](http://www.maternityaudit.org.uk)  
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